Project Name: **BAGO-MARAGLE FOREST SOIL SURVEY**
Project Code: **BGM_FSS** **Site ID:** **0018** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By: P. Ryan
Date Desc.: 14/02/96
Map Ref.: Sheet No. : 8526 DGPS
Northing/Long.: 6027136 AMG zone: 55
Easting/Lat.: 621457 Datum: AGD66
Locality:
Elevation: 1311 metres
Rainfall: No Data
Runoff: No Data
Drainage: Well drained

Geology

ExposureType: Soil pit
Geol. Ref.: Sgg
Conf. Sub. is Parent. Mat.: Probable
Substrate Material: Granodiorite

Land Form

Rel/Slope Class: No Data
Morph. Type: Mid-slope
Elem. Type: Hillslope
Slope: 17 %
Pattern Type: No Data
Relief: No Data
Slope Category: No Data
Aspect: 225 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:
Melanic-Acidic Mesotrophic Red Kandosol Medium Gravelly Clay-loamy Clay-loamy Very deep
Mapping Unit: N/A
Principal Profile Form: Um7.11

ASC Confidence:
All necessary analytical data are available.
Great Soil Group: Red earth

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments: 2-10%, coarse gravelly, 20-60mm, subangular, Schist; 2-10%, coarse gravelly, 20-60mm, subangular tabular, Schist; 2-10%, coarse gravelly, 20-60mm, angular, Quartz

Profile Morphology

O1	0 - 0.03 m	Organic Layer; ;
A1	0.03 - 0.18 m	Black (5YR2.5/1-Moist); Mechanical, 5YR46, 0-2% , Prominent; Clay loam; Moderate grade of structure, 2-5 mm, Polyhedral; 5-10 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; 0-2%, coarse gravelly, 20-60mm, subangular, Quartz, coarse fragments; 10-20%, fine gravelly, 2-6mm, subangular tabular, Coal, coarse fragments; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Smooth change to -
A3	0.18 - 0.33 m	Dark reddish brown (5YR3/2-Moist); ; Clay loam; Moderate grade of structure, 5-10 mm, Polyhedral; 10-20 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; 2-10%, medium gravelly, 6-20mm, subangular, Schist, coarse fragments; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Gradual, Smooth change to -
B1	0.33 - 0.53 m	Dark reddish brown (5YR3/3-Moist); Biological mixing, 5YR32, 2-10% , Faint; Clay loam, sandy; Weak grade of structure, 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; 2-10%, medium gravelly, 6-20mm, subrounded tabular, Schist, coarse fragments; Field pH 5.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Gradual, Smooth change to -
B21	0.53 - 0.78 m	Yellowish red (5YR4/6-Moist); Biological mixing, 5YR32, 2-10% , Faint; Clay loam, sandy; Massive grade of structure; Earthy fabric; Moist; Weak consistence; 2-10%, medium gravelly, 6-20mm, subrounded tabular, Schist, coarse fragments; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Smooth change to -
B22	0.78 - 1.18 m	Red (2.5YR4/6-Moist); ; Clay loam, sandy; Massive grade of structure; Earthy fabric; Moist; Weak consistence; 10-20%, coarse gravelly, 20-60mm, subangular tabular, Schist, coarse fragments; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Clear change to -
C1	1.18 - 1.63 m	Strong brown (7.5YR5/6-Moist); ; Coarse sandy loam; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Very weak consistence; 0-2%, medium gravelly, 6-20mm, subangular, Granodiorite, coarse fragments; Field pH 4.5 (Raupach); Gradual change to -
C2	1.63 - 2.53 m	Yellowish brown (10YR5/4-Moist); ; Clayey coarse sand; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Very weak consistence; Field pH 4 (Raupach);

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A1	Thick fungal mats form clods. Dark colour due to ash and charcoal content.
B22	Sedimentary gravel to this depth.
C1	Substrate is weathering granodiorite.

Observation Notes
Logged ash stand.

Site Notes
COMP 23H,77614-1,BRG 243D,100M FR RD J

Morphological Notes

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0018 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable Acidity	CEC	ECEC	ESP
			Ca	Mg	K	Na				
m		dS/m	Cmol (+)/kg							%
0 - 0.03										
0.03 - 0.18	4.66C		5.5H	1.19	0.96	0.11	2.44J 0K		10.19E	
0.18 - 0.33	4.67C		2.98H	0.71	0.64	0.07	1.66J 0K		6.06E	
0.33 - 0.53	4.66C		0.83H	0.54	0.31	0.05	0.71J 0K		2.44E	
0.53 - 0.78	4.38C		0.94H	0.87	0.42	0.08	1.19J 0K		3.5E	
0.78 - 1.18	4.12C		0.41H	0.79	0.34	0.1	1.94J 0K		3.57E	
1.18 - 1.63	4.19C		0H	0.13	0.22	0.1	0.78J 0K		1.23E	
1.63 - 2.53	4.16C		0H	0.07	0.11	0.02	0.93J 0K		1.13E	

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis				
								GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.03												
0.03 - 0.18		7.41B		1244B	0.21A		0.52	43.72				
0.18 - 0.33		4.45B		1065.7B	0.18A		0.98	34				
0.33 - 0.53		1.77B		529.5B	0.07A		0.95	30.94				
0.53 - 0.78		0.93B		425.1B	0.04A		1.10	27.68				
0.78 - 1.18		0.38B		347.2B	0.02A		1.45	23.79				
1.18 - 1.63		0.09B		258.2B	0.01A			13.95				
1.63 - 2.53		0.04B		269.4B	0A			6.48				

Depth	COLE	Gravimetric/Volumetric Water Contents						K sat	K unsat
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar	
m		g/g - m3/m3						mm/h	mm/h
0 - 0.03									
0.03 - 0.18									
0.18 - 0.33									
0.33 - 0.53									
0.53 - 0.78									
0.78 - 1.18									
1.18 - 1.63									
1.63 - 2.53									

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Laboratory Analyses Completed for this profile

15_NR	Sum of Ex. cations + Ex. acidity - Not recorded
15E1_AL	Exchangeable Al - by compulsive exchange, no pretreatment for soluble salts
15E1_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) by compulsive exchange, no pretreatment for soluble
15E1_H	Exchangeable H - by compulsive exchange, no pretreatment for soluble salts
15E1_K	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15E1_MG	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15E1_NA	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
2A1	Air-dry moisture content
4B2	pH of 1:5 soil/0.01M calcium chloride extract - following Method 4A1
6B2	Total organic carbon - high frequency induction furnace, volumetric
7A2	Total nitrogen - semimicro Kjeldahl , automated colour
9A3	Total Phosphorus (ppm) - semimicro kjeldahl, automated colour
P10_GRAV	Gravel (%)
P3A1	Bulk density - g/cm3